UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,890	08/18/2003	Neal R. Caliendo JR.	RPS920030090US1	3348

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EXAMINER
INGBERG, TODD D

ART UNIT	PAPER NUMBER
2193	

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/642,890	CALIENDO ET AL.
	Examiner	Art Unit
	Todd Ingberg	2193

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*18 August 2003*</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>*1-36*</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>*1-36*</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>*8/18/03*</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>*8/18/03*</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Claims 1 – 36 have been examined.

Drawings

1.   Figure 1 should be designated by a legend such as --Prior Art-- because only that which is

old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR

1.121(d) are required in reply to the Office action to avoid abandonment of the application. The

replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR

1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted

by the examiner, the applicant will be notified and informed of any required corrective action in

the next Office action. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

2.   The Information Disclosure Statement filed August 18, 2003 has been considered.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

Claims 19 - 36 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. The current focus of the Patent Office in regard to

statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial

exception (software) is that the claimed invention recite a practical application. Practical

application can be provided by a physical transformation or a useful, concrete and tangible

result. No physical transformation is recited and additionally, the final result of the claim is

for providing an image which is not a tangible result because the claims to not explicitly

claim the result being on a computer readable medium. The following link on the World

Wide Web is for the United States Patent And Trademark Office (USPTO) policy on 35

U.S.C. §101.

<http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf>

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 36 are rejected under 35 U.S.C. 102(b) as being anticipated by **DERIVE**: A Tool That Automatically Reverse-Engineers Instruction Encodings, Dawson R. Engler et al., ACM, 2000, pages 12 – 22.

Claim 1
DERIVE anticipates a method for providing an image of software installed on a computer system, the method comprising the steps of:
(a) deconstructing the image into at least one portion (Derive, Abstract, page 1, Reverse Engineering – installed software); and
(b) creating at least one module from the at least one portion of the image (Derive, Conclusion, page 19, instruction encoding and page 22, encoding structure, Figure 5 – emitter specification).

Claim 2
The method of claim 1 wherein the deconstructing step (a) further comprises the steps of: (a2) scanning the image (As per claim 1 and DERIVE, page 21 – 22, criteria for the scan); and (a3) identifying at least one portion of the image to be modularized (DERIVE, use of criteria above).

Claim 3
The method of claim 2 wherein the identifying step (a3) comprises the steps of (a3ii) providing a list of portions of the image to be modularized; and (a3iii) selecting at least one portion of the image to be modularized. As per claim1.

Claim 4

The method of claim 1 wherein the at least one portion of the image represents at least one software program. As per claim 1.

Claim 5

The method of claim 4 wherein the at least one software program is hardware independent. (DERVICE Abstract, second paragraph and page 12 right side third paragraph).

Claim 6

The method of claim 1 wherein the at least one portion of the image represents a plurality of software programs. As per claim 1.

Claim 7

The method of claim 6 wherein the plurality of software programs comprises a combination of hardware-independent and hardware-dependent software programs. As per claim 5.

Claim 8

The method of claim 1 wherein the at least one portion of the image comprises one or more of an operating system, a set of drivers, and application software. As per claim 5.

Claim 9

The method of claim 1 wherein the creating step (b) further comprises the steps of
(b2) extracting the at least one portion of the image; and
(b3) generating at least one module from the extracted portion of the image.
As per claim 1.

Claim 10

The method of claim 9 wherein the extracted portion of the image comprises uninstall scripts.
DERIVE, the derived specification in the Abstract as per claim 1.

Claim 11

The method of claim 10 wherein the generating step (b3) comprises the steps of-
(b3ii) scanning the uninstall scripts; and
(b3iii) generating install scripts from the uninstall scripts.
As per claim 1.

Claim 12

The method of claim 11 wherein the generating step (b3iii) comprises the steps of:
(b3iiiA) reversing the order of the uninstall scripts;
(b3iiiB) determining uninstall scripts from the uninstall scripts; and
(b3iiiC) configuring a portion of the install scripts.
As per claims 1 and 5.

Claim 13

The method of claim 1 further comprises the step of (c) formatting the at least one module for use in a new image or part of a new image to be used with a software program. As per claim 1.

Claim 14
The method of claim 13 wherein the software program is hardware independent application software. As per claim 5.

Claim 15
The method of claim 14 wherein the hardware-independent application software is a hardware-independent imaging tool. As per claim 5.

Claim 16
The method of claim 1 wherein the module is hardware independent. As per claim 5.

Claim 17
The method of claim 1 wherein the creating step (b) further comprises the step of (b2) creating a plurality of modules from the at least one portion of the image. As per claim 1.

Claim 18
The method of claim 17 wherein the plurality of modules comprises a combination of hardware-independent and hardware-dependent modules. As per claim 5.

Claim 19
A computer-readable medium including program instructions for providing an image of software installed on a computer system, comprising the program instructions for:
(a) deconstructing the image into at least one portion; and
(b) creating at least one module from the at least one portion of the image. As per the rejection for claim 1.

Claim 20
The medium of claim 19 wherein the deconstructing instruction (a) further comprises the instructions of
(a2) scanning the image; and
(a3) identifying at least one portion of the image to be modularized. As per the rejection for claim 2.

Claim 21
The medium of claim 20 wherein the identifying instruction (a3) comprises the instructions of
(a3ii) providing a list of portions of the image to be modularized; and
(a3iii) selecting at least one portion of the image to be modularized.
As per the rejection for claim 3.

Claim 22

The medium of claim 19 wherein the at least one portion of the image represents at least one software program. As per the rejection for claim 4.

Claim 23
The medium of claim 22 wherein the at least one software program is hardware independent. As per the rejection for claim 5.

Claim 24
The method of claim 19 wherein the at least one portion of the image represents a plurality of software programs. As per the rejection for claim 6.

Claim 25
The method of claim 24 wherein the plurality of software programs comprises a combination of hardware-independent and hardware-dependent software programs. As per the rejection for claim 7.

Claim 26
The medium of claim 19 wherein the at least one portion of the image comprises one or more of an operating system, a set of drivers, and application software. As per the rejection for claim 8.

Claim 27
The medium of claim 19 wherein the creating instruction (b) further comprises the instructions of (b2) extracting the at least one portion of the image; and
(b3) generating at least one module from the extracted portion of the image.
As per the rejection for claim 9.

Claim 28
The medium of claim 27 wherein the extracted portion of the image comprises uninstall scripts. As per the rejection for claim 10.

Claim 29
The medium of claim 28 wherein the generating instruction (b3) comprises the instructions of:
(b3ii) scanning the uninstall scripts; and
(b3iii) generating install scripts from the uninstall scripts.
As per the rejection for claim 11.

Claim 30
The medium of claim 29 wherein the generating instruction (b3iii) comprises the instructions of
(b3iiiA) reversing the order of the uninstall scripts;
(b3iiiB) determining install scripts from the uninstall scripts; and
(b3iiiC) configuring a portion of the install scripts.
As per the rejection for claim 12.

Claim 31

The medium of claim 19 further comprises the instruction of (c) formatting the at least one module for use in a new image or part of a new image to be used with a software program. As per the rejection for claim 13.

Claim 32
The medium of claim 31 wherein the software program is hardware independent application software. As per the rejection for claim 14.

Claim 33
The medium of claim 32 wherein the hardware-independent application software is a hardware-independent imaging tool. As per the rejection for claim 15.

Claim 34
The medium of claim 19 wherein the module is hardware independent. As per the rejection for claim 16.

Claim 35
The method of claim 19 wherein the creating instruction (b) further comprises the instruction of (b2) creating a plurality of modules from the at least one portion of the image. As per the rejection for claim 17.

Claim 36
The method of claim35 wherein the plurality of modules comprises a combination of hardware-independent and hardware-dependent modules. As per the rejection for claim 18.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5, 7, 14-16, 18 23, 25, 32-34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over DERIVE in view of Modular Type-Based Reverse Engineering of Parameterized Types in Java Code, Dominic Duggan, ACM, 1999, pages 97-113.

Since, it is not clear if the independence the Applicant is claiming is from the input of the output of reverse engineering the Examiner has elected to reject the following claims under 35 U.S.C. 103(a).

Motivation to Combine DERIVE and JAVA

DERIVE teaches the emitting of C code (DERIVE, page 22). C code is not universally known to be platform independent. It is JAVA who teaches a well known platform independent language. Therefore, it would have been obvious to one of ordinary skill in the art to combine DERIVE and JAVA, because reverse engineering for a language like JAVA which is platform independent by the implementation of a virtual machine, would make a reverse engineering tool more flexible.

Claims 5 and 23
The method of claim 4 wherein the at least one software program is hardware independent. (JAVA, page 97, Introduction).

Claims 7 and 25
The method of claim 6 wherein the plurality of software programs comprises a combination of hardware-independent and hardware-dependent software programs. As per claim 5.

Claims 14 and 32
The method of claim 13 wherein the software program is hardware independent application software. (JAVA, page 97, Introduction).

Claims 15 and 33
The method of claim 14 wherein the hardware-independent application software is a hardware-independent imaging tool. (JAVA, page 97, Introduction).

Claims 16 and 34
The method of claim 1 wherein the module is hardware independent. (JAVA, page 97, Introduction).

Claims 18 and 36
The method of claim 17 wherein the plurality of modules comprises a combination of hardware-independent and hardware-dependent modules. (JAVA, page 97, Introduction).
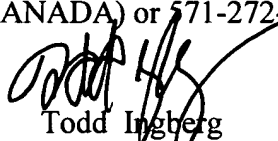

Correspondence Information
Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Todd Ingberg whose telephone number is (571) 272-3723. The

examiner can normally be reached on during the work week..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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TI